its development. Much work has also been done by the National Association for the Prevention of Tuberculosis which "believes in the value of art not only as a means of individual expression but as one definite source of mental and bodily healing". During the last three years this Association has organized regular art competitions in sanatoria, and these competitions now function in 120 sanatoria. In addition, a panel of twelve artists has paid 400 visits to sanatoria during this period. In these competitions an average of 300 paintings are received regularly. It is refreshing in these days of chemotherapy and radiotherapy to be reminded that the art of medicine is still wise enough to realize its integral relationship with the things of the mind and of the spirit.

A MEDICAL GOVERNOR

There has been widespread pleasure at the official announcement of the appointment of Sir Alexander Hood as Governor and Commander-in-Chief of Bermuda. One of the greatest Director-Generals in the annals of the Army Medical Service, he was clearly marked out for further promotion. It is not often that a medical man has been appointed Governor of a Colony, but Sir Alexander Hood's outstanding qualities as an administrator, his gift for handling men and his capacity for work are the very qualities that are most required at the present moment in the Governor of a Colony. He carries with him the best wishes of all his former colleagues and subordinates in the R.A.M.C. as well as those of all his many other friends in the profession to which he has brought such lustre.

WILLIAM A. R. THOMSON

London, July, 1949.

ABSTRACTS FROM CURRENT LITERATURE

Medicine

Management of Lower Nephron Nephrosis. Hoffman, W. S. and Marshall, D.: *Arch. Int. Med.*, **83**: 249, 1949.

Lower nephron nephrosis, now recognized as a distinct entity, means a severe disturbance of function of the lower cortex because of degeneration and necrosis of the cells of the ascending loop of Henle and distal convoluted tubules along with interstitial œdema and infiltration of cells. This disturbance is most often seen after crushing injuries, in transfusion reactions, or resulting from sulfonamide intoxication, and various other shock-producing accidents. The problem created is oliguria progressing to anuria with death from uræmia imminent.

The authors feel that intervention, decapsulation, uretero-pelvic lavage, etc., have no physiological support. Death, when it occurs is from uræmia. The patients usually live for 7 to 10 days. In those who survive, diuresis begins on the 5th day. The authors feel that once anuria has developed, there is no known treatment that produces diuresis until some healing takes place in the lower nephron, because the damage to these tissues is the real cause of anuria.

The authors in their treatment, instead of trying to force a damaged kidney to secrete, endeavour to keep the patient alive until there is sufficient recovery in the tubules to allow effectual diuresis. Apparently there is improvement in kidney function about the 10th day, but uræmia has usually been fatal by that time. Treatment is aimed at hastening the recovery of the kidney tissues while postponing the onset of uræmia. The answer is restoration and maintenance of a good state of nutrition. This includes water soluble vitamins and blood transfusions, also careful induction of œdema dilutes the toxic products and adds to the alkali reserve. The dangers of this can be minimized by proper precautions. Œdema is usually already present and so there is a lack of chloride and sodium. Several litres of intravenous normal saline and 6th molar sodium lactate are used. This usually starts diuresis. Meanwhile, blood transfusions are continued. Sodium bicarbonate (i.v.) was used to combat acidosis. A good soft diet was allowed. Vitamins B and C as well as calcium were given in large quantities. On succeeding days this fluid (i.v.) was continued, the quantity regulated by the laboratory findings. Hypertonic saline appeared to relieve threatening accumulations of fluids and make the patient more comfortable. Patients were encouraged to eat normally, which meant they could get along without intravenous treatment. If unable to take food by mouth, amino acids were given i.v. Penicillin was used routinely. Once the urinary output reached 500 c.c. per day, all fluid was stopped, patient propped up and the legs allowed to hang over the edge of the bed part of the time. Digitalis and aminophylline were used.

Six cases are presented where the patients were treated in this way, two were blood transfusion reactions, two reactions from drugs of the sulfa group, one shock from severe hæmorrhage and one poisoning with carbon tetrachloride causing acute hepatitis as well as lower nephron nephrosis. Five recovered and one died, the fatal case one of blood transfusion reaction. P. M. MACDONNELL

A Re-examination of the Structure of the Mammalian Liver: I. Parenchymal Architecture. Elias, H.: *Am. J. Anat.*, **84**: 311, 1949.

The term "cord" (or "trabecula") for a subdivision of liver parenchyma has always been confusing to medical students and others for they have never been able to see such a structure isolated in sections. Elias would disregard this erroneous conception of the older histologists and would substitute for it such terms as "sheet", "plate" or "lamina". These sheets are one cell thick, fenestrated and much branched. They are curved and wall in the sinusoids, rather than being enclosed by these, as in the older misconception. Coursing in these irregular laminæ is the much-branched network of bile canaliculi. Diagrams make this idea clear. The study was made in three dimensions on livers of man, cat, rabbit and horse. C. C. MACKLIN

Mitochondrial Arrangement in Alveolar Epicytes and Foam Cells of Mouse Lungs, Particularly as Induced by the Vacuoloids. Macklin, C. C.: *The Biol. Bull.*, **96**: 178, 1949.

In alveolar epicytes (septal cells) and alveolar foam cells of albino mouse lungs the most characteristic feature of mitochondria is their disposition around the vacuoloids to outline hollow spheres or, in section, circles. This gives these cells in fuchsin-stained sections a lace-like appearance. Mitochondria are never found within the vacuoloids.

There is a numerical preponderance of coccoid and ovoid forms. Under the cell membrane, rods and smaller granules often form an imperfect layer in which two parallel rows may sometimes be seen. Another such layer, usually of shorter forms, may overlie the nucleus. In epicytes a curious formation of parallel rods in the form of a hollow cylinder often marks the shaft. Noteworthy in these cells, too, are the angular piles of mitochondria, predominantly of rods, which suggest the supports of an Indian wigwam. These point outward at the lateral margin of the larger or head end. In the greater foam cells the mitochondria are less conspicuous than in those of smaller size, or in well developed epicytes. C.C.M.

Rehabilitation of the Hemiplegic Patient. Lowman, E. W.: *J. Am. M. Ass.*, **137**: 431, 1948.

This is a most interesting and timely article. All too often patients are committed to a bed or wheel chair life following a hemiplegia, when under adequate training and supervision they could again become

ambulant. In the study presented 90% (10 patients) of the fresh cases, reambulation was accomplished after an average period of 67.1 days. Improvement occurred in the remaining 10%. In 66% of the chronic cases (18 cases) reambulation was accomplished after an average period of 118½ days. Improvement occurred in an additional 17%. The author points out that the early, intensive and intelligent use of physical medicine, with emphasis on therapeutic reconditioning exercises, assures a potentially good prognosis in the rehabilitation of patients with uncomplicated hemiplegia. J. PRESTON ROBB

A Clinical and Experimental Study of Isuprel in Spontaneous and Induced Asthma. Lowell, F. C., Curry, J. J. and Schiller, I. W.: *New England J. Med.*, **240:** 45, 1949.

Isuprel, used in a hand nebulizer, is an effective agent in the treatment of mild and moderately severe asthma. While it is probably the best agent for self-medication it is ineffective if the asthma is severe or prolonged. Isuprel, used sublingually, is uniformly unsatisfactory as a means of obtaining relief in asthma. The subcutaneous and intramuscular routes of administration produced no better results than did the nebulizer and had the disadvantage of very frequent side effects (tachycardia, palpitation and nervousness). Such reactions rarely occurred when isuprel was used under the tongue or by inhalation. NORMAN S. SKINNER

Further Studies in the Use of Furacin in Dermatology. Downing, J. G. and Brecker, F. W.: *New England J. Med.*, **239:** 862, 1948.

Furacin is a valuable agent in the treatment of external infections but it is liable to cause sensitivity reactions severe enough to necessitate long periods of hospital treatment. Such sensitivity reactions are particularly prone to occur when furacin is used in the treatment of infectious eczematoid dermatitis and it should not be employed as an agent of treatment for any length of time on skins proved to be capable of sensitization. Sensitization is reported in 14 of 233 cases, indicating that careful selection and supervision is essential. NORMAN S. SKINNER

Psychological Medicine

Criteria for Early Differential Diagnosis of Psychoneurosis and Schizophrenia. Lewis, N. D. C.: *Am. J. Psychother.*, **3:** 4, 1949.

Even though there have been many worthwhile papers written on the subject of the early diagnosis of schizophrenia, both for the general physician and for the psychiatrist, this is a subject of which frequent reminders are necessary to physicians at large, who often tolerate in their practice patients whom they look on as "just another neurotic", when they might be getting the patient to the more specialized help required by an early schizophrenic. Dr. Nolan Lewis is one of the leading authorities on the subject of schizophrenia; hence his remarks, and those of the discussants of his recent paper, have practical importance for us.

Dr. Lewis is one of those who take the stand that a "neurotic" does not "become schizophrenic", but that early schizophrenics frequently have "pseudo-neurotic" symptoms, which obscure the diagnosis, but which are really different from the symptoms of the neurotic who fears that he is "going crazy". The actual differentiation is best made by an experienced psychiatrist, but some of the features which should suggest a psychiatric consultation include "pan-neurosis" and "pan-anxiety", in which neurotic symptoms and anxiety are widespread in relation to various systems of the body and various things in the environment and in the patient's attitude to life. Another important item is evidence of chaotic sexuality, especially when the patient is excessively frank about intimate sexual matters and infantile sexual impulses in the very first interview. A false excessive frankness may occur as a result of reading psychoanalytical literature, and obscuring of the diagnostic picture may occur if the patient is given shock treatment, but these are problems to be sorted out by the experienced psychiatrist rather than by the general physician. W. DONALD ROSS

An Industrial Psychiatric Program in a Government Setting. Ozarin, L. D. and Herrick, L. M.: *Am. J. Psychiat.*, **105:** 904, 1949.

This paper includes a brief summary of much of the main literature on industrial psychiatry and a description of the employee counselling program in the U.S. Veterans' Administration Central Office. This office employed 12,000 people in 1946, of whom 750 were handled as health or welfare cases. At least half of the 354 health cases were considered due to emotional conditions. Apart from the handling of these problems, industrial psychiatry is described as serving in an advisory capacity to management in promoting efficiency and production and good morale among employees for the mutual benefit of employees and management. This paper should have interest for all physicians engaged in industrial medicine. W. DONALD ROSS

Pathology

Calcific Disease of the Aortic Valve. Hultgren, H. N.: *Arch. Path.*, **45:** 694, 1948.

The author carefully studied the aortic valves in 100 consecutive unselected autopsies of adults. Grossly demonstrable calcium deposits were found in the aortic valves in 46 of these cases. Eleven showed stigmata of valvular rheumatic disease. One other had a bicuspid valve. This left for further study a group of 34, none of which showed any gross or histological evidence of valvular rheumatic disease. It was found that in the absence of rheumatic disease the frequency of calcium deposition in the aortic valve and also the number and size of deposits were greater in the higher age groups. In addition, there was a rough correlation, independent of age, between valvular calcification and the calcium content of the aorta. Microscopic examination in most cases revealed alterations of the connective tissue at the base of the leaflet and, to a lesser degree, in the leaflet itself, which resembled degenerative processes occurring elsewhere in the vascular system. It was in these areas that calcifications were found most frequently, suggesting that the deposition of calcium is part of the same degenerative process. From this study of subclinical stages of calcific disease of the aortic valve in unselected adults it is suggested that in many cases the lesions are a result of a purely degenerative process and do not have a rheumatic origin. J. W. BAWDEN

Histopathology of Virus Encephalomyelitis. Scheinker, I. M.: *Arch. Path.*, **45:** 289, 1948.

This study was based on ten cases of acute anterior poliomyelitis, one case of Japanese, or type B, epidemic encephalitis and one case of Vienna (von Economo's), or type A, epidemic encephalitis. The histopathological features of these entities were found to be essentially similar. They consisted of focal destructive changes in the nerve cells and focal proliferation of microglia. The latter often led to the formation of characteristic microglial nodules in the areas of nerve cell destruction. All cases also showed inflammatory changes manifested by perivascular accumulations of lymphocytes and monocytes and infiltration of the leptomeninges by similar cells. The severity and distribution of this inflammatory change, however, did not correspond to the severity and distribution of the neuronal changes. In cases of Japanese B encephalitis the cerebral cortex, the thalamus and substantia nigra appear to be predominantly affected. In poliomyelitis the changes are most marked

in the gray matter of the spinal cord and of some of the cranial nerve nuclei in the medulla and midbrain. In the Vienna type of encephalitis the process is most intense throughout the basal ganglia and substantia nigra.

The author concluded that the differentiation of the various types of virus encephalitis must be based on the distribution of the lesions rather than on their histopathological characteristics. F. A. JAFFÉ

Ulcers of the Upper Part of the Gastro-intestinal Tract Associated with Acute Damage of the Brain. Wyatt, J. P. and Khoo, P. N.: *Arch. Path.*, **47**: 110, 1949.

This is a report of 4 cases in 3 of which head injury occurred and in the 4th of which death occurred following anæsthesia with ethyl chloride and ether and tonsillectomy. In the traumatic cases extensive hæmorrhage into the brain substance involved the frontal and temporal lobes and the island of Reil. In 2 cases, there was hæmorrhage in the hypothalamus. In the 4th case there was generalized degeneration of neurones in both the cortical and subcortical centres. Associated with the brain lesions were multiple acute ulcers of the stomach and duodenum. In 2 of the traumatic cases there was ulceration and perforation of the œsophagus near the cardiac end of the stomach. The lesions in all the cases but one showed definite evidence of an inflammatory response to the ulceration indicating their ante-mortem nature. The perforations of the œsophagus were not suspected because of the comatose condition of the patients following their injuries. The senior author examined the tissues of 210 cases of head injury in England during the war without finding gastro-intestinal ulceration. This is attributed to the fact that the patients did not live long enough to develop the lesions in contrast to the present group of patients who lived from 1½ to 5 days following the cerebral injury. It is of interest that the injury to the brain did not have to be located in the hypothalamus to result in the lesions of the stomach and duodenum.

S. D. KOBERNICK

The Mole as a Possible Reservoir of Poliomyelitis. Rector, L. E.: *Arch. Path.*, **47**: 366, 1949.

The author suggests four *a priori* concepts concerning any animal that may possibly be a reservoir for the virus of poliomyelitis: (1) it will be found throughout the temperate and tropical zones; (2) it will account for the frequently observed tendency of the disease to start and to have a higher incidence in rural than in urban populations; (3) it will account for the seasonal tendency of the disease in man; (4) it will be so inconspicuous as to have escaped consideration to date. Having decided that the mole might well fit in with these concepts as a vector of the disease, its susceptibility to the virus of poliomyelitis was then tested. Most of the tested moles showed muscular paralysis of varying degree and died within one to 139 days after inoculation. Pathologically none of the lesions characteristic of human poliomyelitis were present, and attempts to pass the virus to monkeys were unsuccessful. TORRENCE P. B. PAYNE

Chronic Inflammatory Lesions of Skeletal Muscle in Rheumatoid Arthritis and in Other Diseases. Ogryzlo, M. A.: *Arch. Path.*, **46**: 301, 1948.

A limited number of sections of skeletal muscle from a variety of cases, including examples of the collagen disease group, were studied. The author concludes that inflammatory lesions of the type recently described in patients with rheumatoid arthritis may be found in a variety of diseases. He regards the lesions as non-specific in character and showing no relationship to the degree of degenerative change present in the muscle. TORRENCE P. B. PAYNE

Sarcoidosis Involving the Heart. Scotti, T. M. and McKeown, C. E.: *Arch. Path.*, **46**: 289, 1948.

The authors report a case of sarcoidosis with involvement of the myocardium and sudden death in a 26 year old negro man. Reviewing the literature they find 12 previously reported autopsied cases of sarcoid of the myocardium. Their case is the 5th reported case of death due to myocardial involvement and the 3rd case of sudden death. The paper is interesting since it brings out the point that death may occur from sarcoid itself when it involves some vital structure, rather than from the development of tuberculosis, as so often happens. It is well known, of course, that sarcoid not infrequently involves the myocardium.

TORRENCE P. B. PAYNE

OBITUARIES

A. E. Archer, M.D.

AN APPRECIATION

Albert Ernest Archer died as he had lived, with equanimity, imperturbed by the lesser affairs of men. He had an abiding faith in the Master of the Universe, and a charitable attitude toward the weaknesses of his fellow men. He felt honoured in being a member of the medical profession and during his life time did much to maintain the dignity and prestige of the profession he loved so much.

At the time of his death I had known him intimately for more than twenty-seven years. Words given to Marcus Antonius to describe Brutus might have been written to describe Dr. Archer,

> "His life was gentle, and the elements
> So mixed in him, that Nature might rise up,
> And say to all the world, 'This was a Man'."

His patient was always his first consideration, and time, roads, or weather, in the horse and buggy days, or the pressure of "things" in later years did not alter that characteristic of his practice. His judgment was of the first order and his faculty of arriving at a correct diagnosis in the obscure case bordered on the uncanny. His ability as a surgeon was well known to his confrères. He was granted a Fellowship in both the Canadian and American College of Surgeons in recognition of this ability. An old man weeping quietly in a hospital ward or hundreds standing outside the church at the time of his funeral suggest that there was something more to his life than the technical ability of a good surgeon or the mature judgment of a practitioner. He was a friend.

This is not the time nor the place to catalogue all the useful activities of the life just completed. He gave endless hours of thought and effort to improving the welfare of the medical profession. His knowledge of the economics of the practice of medicine was second to none in our Dominion and probably equalled that of any man of his time. In medical and hospital circles in his own Province and later in the Federal field he had been an earnest student and leader for many years. He was President of the Canadian Medical Association in 1942. During the war years he was a member of the Committee of Seven and of the Procurement and Assignment Board. Later he was adviser in Economics to the Canadian Medical Association. In fulfilling his duties in connection with these varied responsibilities he crossed this continent many times. He lived a full and useful life and was possessed of abundant energy which he utilized to the full in doing good. He was twice mentioned in the King's honour list, first the O.B.E. and later the C.B.E.

One need not say of such a man that he was a beloved husband and a good father. His home life meant much to him and he was never happier than when he was